

REMARKS

The Examiner rejected claims 1-11 and 15 over cited prior art. Claims 2, 4, 5, 7, 10-11 and 15 have been canceled. Claims 1, 3, 7 and 9 have been amended. Claims 1, 3, 6, 7 and 9 are pending in this case. The foregoing amendments and the following remarks are considered by applicant to overcome each of the Examiner's outstanding rejections. An early Notice of Allowance is therefore requested.

Claim 1 has been amended to incorporate limitations from previous claims 2 and 5. Claim 3 has been amended to depend from claim 1. Claim 7 has been amended to incorporate limitations from previous claims 8 and 11. Claim 9 has been amended to depend from claim 7.

On page 2 of the office action, the Examiner objected to claims 2, 4, 5, 8, 10 and 11. To the extent that amended claims 1, 3, 7 and 9 incorporate language from previous claims 2, 4, 5, 8, 10 and 11, the informalities were corrected. The Examiner objected to claims 2 and 8 due to the word "plural" prior to "marker images" and "feature images." Amended claims 1 and 7 do not refer to "plural" marker images or "plural" feature images. The Examiner objected to claims 4, 5, 10 and 11 and suggested to replace "the degree" with "a degree." Amended claims 1 and 7 have been so corrected. The Examiner also objected to claims 5 and 11 and suggested that the term "the two markers" be replaced with "two markers." Claims 1 and 7 have been so amended.

On page 3 of the office action, the Examiner rejected claims 2-6 and 8-11 under 35 USC 112, second paragraph. In particular, the Examiner rejected claims 2-5 and 8-11 since claims 2 and 8 recited the limitation "the image" without sufficient antecedent basis. This lack of an antecedent basis has been corrected in amended claims 1 and 7.

The Examiner also rejected claims 3 and 9 because it was unclear to the Examiner how movement of each of the limbs is based on a relative position of the marker image of each of the limbs to a position of the marker image of the reference point marker in the image. The Examiner also stated that it was unclear whether the "marker image" refers to an additional physical entity or merely the portion of "the image" in which "the marker" is located.

The claim language "marker image" refers to a portion of the image in which the marker is located. It does not refer to an additional physical entity. Applicants believe that since the claim language recites that the marker images are extracted from an image of the infant, that one of ordinary skill in the art would understand that the marker images are images and not separate

physical entities.

The determination of the movement of the limbs can be based on a relative position of the markers on the limbs to the reference marker. By using the term "relative position," the applicant means that the distance from each marker to the reference marker is measured to determine movement. If the distance between one marker and the reference marker changes, then it can be determined that the limb was moved relative to the reference point. If the distance between the marker and the reference point does not change, then it can be determined that there was no movement. Having a relative position can be important because it can distinguish between movements of the limbs opposed to movement of the infant. If the entire infant were moved between the images being taken, it might appear as though the infant moved its limbs if the positions of the markers were compared to an absolute reference point that did not move with the infant. Tying the marker positions on the limbs to the reference points (typically on the body or head) can more accurately determine movements of the limbs.

The Examiner also rejected claims 5 and 11 stating that it was unclear what was meant by "a straight line connecting two markers attached to two right and left limbs." Amended claims 1 and 7 recite the two separate occasions where (1) a straight line is connecting markers that are attached to a right leg and right arm and (2) a straight line is connecting markers that are attached to a left leg and left arm. The Examiner also rejected the reference to "a midpoint" and suggested that the reference be "a first midpoint" for the first factor and "a second midpoint" for the second factor. Claims 1 and 7 have been so amended.

The Examiner also rejected claim 6 for having an insufficient antecedent basis for the limitation "the markers." Claim 6 depends from amended claim 1, which now recite markers attached to the four limbs of the infant. Thus, there is an antecedent basis for the objected claim language.

The Examiner also rejected claim 6 as being unclear as to whether the markers are (1) coated with or contain a substance that emits light upon either receiving ultraviolet or receiving phosphor, or (2) whether the markers are coated either with a phosphor, or (3) are coated with a substance that emits light upon receiving ultraviolet. Applicants confirm that the claim language refers to the first situation.

The Examiner also rejected claims 1, 2 4-6 and 15 as being anticipated by Goswami. In particular, with regard to claim 5, the Examiner stated that Goswami teaches determining the

existence/nonexistence or degree of coordination among the plural limbs by using the factor of the speed of the midpoint of a straight line connecting two markers attached to two right and left limbs. The Examiner further stated that the angular velocity of the joints would contain a velocity of the midpoint of the markers used to determine the angles of the joints. The applicant respectfully disagrees.

As noted above, claim 1 incorporates the claim limitations of previous claim 5. In amending claim 1, claim 1 specifically recites that the various midpoints (first through sixth) are taken from a straight line drawn between two separate limbs. The movement of the midpoint of any line will be dependent on the movements of *both* limbs. If one limb moves a great deal and the other does not, then the movement of the midpoint will be a mixture of the movements of both limbs. Goswami teaches the tracking of the angular velocity and position of only one joint. Tracking the movement of one joint is very different than tracking the movement of the midpoint of a line between both limbs. The movement of one joint can be very different than the movement of the midpoint of the line connecting both limbs. Thus, the Examiner's contention that tracking the angular velocity of one joint contains the velocity of the midpoint of the markers is incorrect. To the extent that the Examiner's contention was based on the understanding that the claim language "two markers attached to two right and left limbs" meant markers on the same limb, that claim language was changed when incorporated it into amended claim 1 to specifically recite the relationships between the markers as being on separate limbs. As such, amended claim 1 is allowable.

Amended claim 7 incorporates the claim limitations of claim 11. In rejecting claim 11, the Examiner specifically referred to the rejection of claim 5. As noted above, Goswami does not anticipate claim 5. Similarly, Goswami does not render amended claim 7 obvious since similar claim language was adopted in amended claim 7.

Claims 3, 6 and 9 either depend from amended claims 1 or 7 and should be allowable for the same reason that claims 1 and 7 are allowable.

In view of the foregoing, it is respectfully submitted that the claims are in condition for allowance and favorable reconsideration and prompt notice to that affect are earnestly solicited.

Respectfully submitted,

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